



Hazardous Materials Transportation Training & Security Requirements





Objectives

- Clarify training requirements in the HMR, to identify those employees who must be trained and to determine what type of training may be best for the employees
- Increase awareness and understanding of the proper transportation of hazardous materials
- Familiarize the hazmat community with publications and training materials available from PHMSA
- Provide training aids to better meet the HMR requirements.
- To determine who needs a security plan





It's the Law



The Federal hazardous materials transportation law requires training of all hazmat employees.

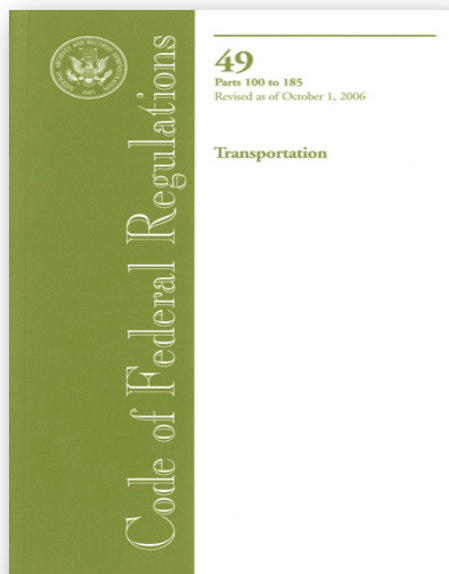
49 U.S.C. Section 5107





Training Requirements

HMR training requirements are found in **49 CFR, Part 172, Subpart H**





Inspections Trends

Common issues identified during inspections include:

- Failure to maintain training records
- Failure to train hazmat employees
- Packages not properly marked and labeled
- Incorrect shipping papers
- Failure to register with PHMSA
- Lack of a Security Plan





HAZMAT INCIDENTS



Hazmat incidents caused by human error can be reduced by implementing an effective training program.





Effective Training Program

- Develops strong safety culture
- Heightens employee safety
- Improves a company's effectiveness, efficiency and productivity
- Increases employees skills
- Aids in ensuring safe and secure shipments
- Reduces likelihood of catastrophic event such as fire aboard aircraft
- Provides employees an understanding of compliance





Hazardous Material Training Requirements

- The HMR mandates training requirements for persons who prepare hazmat for shipment, who transport hazmat in commerce.
- The intent of the regulations is to ensure that each hazmat employee is familiar with the HMR, is able to recognize and identify hazardous material.
- Understands the functions of his/her job
- Is knowledgeable about emergency response, self-protection measures, and accident prevention.





Who Needs Hazmat Training?

- US DOT “Hazmat Employee” training rules apply to any company which performs any function in any way regulated by the US DOT Hazardous Material Regulations (HMR)
- The HMR requires all Hazmat employees to be trained including hazmat employers with direct supervision of hazmat transportation functions





Who is a Hazmat Employer

- Any person who uses one or more employee in connection with:
- Transporting hazmat in commerce
- Causing hazmat to be transported or shipped
- Representing, marking, certifying, selling, offering, reconditioning, testing, repairing or modifying packagings





Applicability and Responsibility

- A *hazmat employer* shall ensure that each of his or her *hazmat employees* is trained.
- The responsibility for training (*and the civil penalties for not training*) rests with the *employer*.





How to Begin

- Determine who your hazmat employees are.
- Determine the employees needs
- Assess the training options
- Develop a safety culture
- Designate a training coordinator
- Implement a planning process
- Implement a process for recordkeeping
- Understand the training curriculum





Who is a Hazmat Employee

A person who is:

- Employed full-time, part time, or temporarily
- Directly affecting hazmat transportation safety
- Self-employed
- Loads, unloads or handles hazmat
- A railroad signalman or maintenance-of-way employee
- Designs, manufactures, inspects, marks, tests, or reconditions containers
- Prepares hazmat for transportation
- Operates a transport vehicle





Training Frequency

- Initial training must be completed within 90 days of hazmat employment or change in job function.
- Hazmat employees must be directly supervised by a trained and knowledgeable employee until trained themselves.
- Recurrent (refresher) training is required *at least* every three years.
- Security Plan training is required at least every three years or when it has been revised.

§172.704(c)(1) & (2)





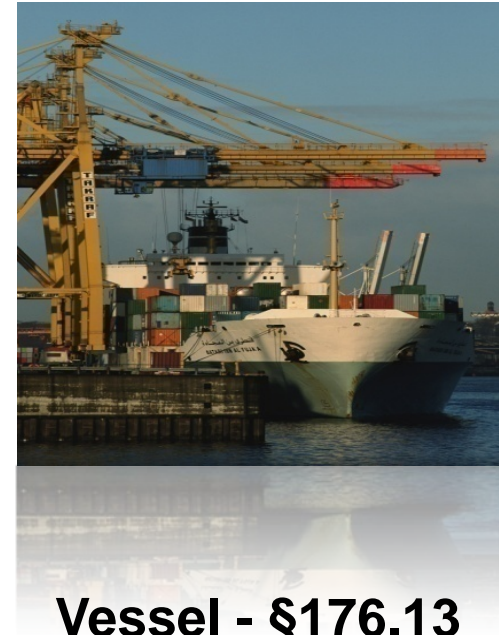
Additional Modal Training Requirements



Air - \$175.20



**Highway -
\$177.800 &
\$177.816**



Vessel - \$176.13





Training Requirements

Hazmat employee training must include:

- General awareness / familiarization training
- Function-specific training
- Safety training
- Security awareness training
- In-depth security training (when applicable)

§172.704(a)





General Awareness/Familiarization

Designed to:

- Provide familiarity with the requirements of the HMR
- Enable hazmat employees to recognize and identify hazardous materials using the hazard communication standards
- All hazmat employees **must** receive General Awareness Training.

§172.704(a)

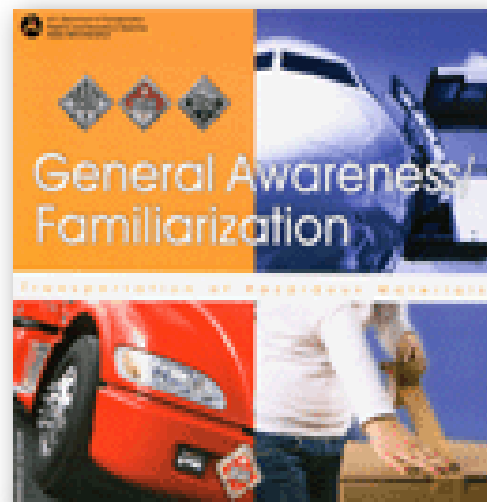




General Awareness/Familiarization

Training CD Highlights:

- Familiarization of the Hazardous Materials Regulations (HMR) and requirements
- Recognize and identify hazardous materials
- Help satisfy the general awareness/familiarization training requirements.
- Does not include testing only knowledge checks.
- Testing must be developed and implemented by your employer.
- Approximately one hour in duration with 6 training modules





Function-Specific Training

- Provides a detailed understand of the HMR.
- Each employee must be trained on the specific functions they are required to perform.
- Training needs will depend on the company operations and the employee's responsibilities.
- Meets requirements of Subchapter C, or special permits issued under subchapter A

§172.704(a)(2)(i)

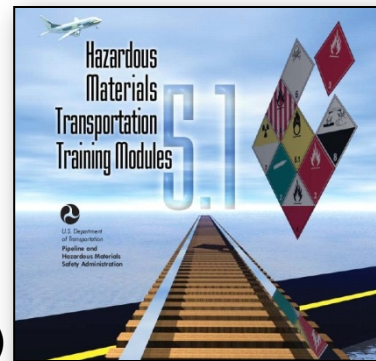




PHMSA Hazardous Materials Transportation Training Modules 5.1

Training CD-ROM Highlights:

- Introduces the HMR
- Meets requirements for general awareness/familiarization training
- Provides a basis for a function-specific training program
- Six Training Modules:
 1. The Hazardous Materials Shipping Table
 2. Shipping Papers
 3. Marking and Labeling
 4. Placarding
 5. Packaging
 6. Carrier Requirements (Highway, Air, Rail, and Water)





Safety Training

Safety training must cover:

- Hazards presented by hazardous material
- Safe handling
- Emergency response information
- Methods and procedures for accident avoidance
- All hazmat employees must receive this training
- Example: Proper procedures for handling packages containing hazardous materials.

§172.704(a)(3)





Security Awareness

Security awareness training must provide:

- Awareness of security risks associated with hazmat transportation
- Methods to enhance transportation security
- How to recognize and respond to possible security threats
- All hazmat employees must receive Security Awareness Training.
- Examples are:
 - Regulatory Requirements
 - Potential Threats
 - Potential Targets
 - Prevention Tools

§172.704(a)(4)





PHMSA Hazmat Transportation Security Awareness Training Module

Training CD Highlights:

- Provides overview of hazmat transportation security issues
- Helps identify and address security risks
- Satisfies HMR security awareness training requirement
- Available Only on Digipack





In-Depth Security Training

- Required for each hazmat employee of an employer required to have a security plan.
- In-Depth Training must include:
 - Company security objectives
 - Specific security procedures
 - Actions to take in the event of a security breach
 - Employee responsibilities
 - Company organizational security structure

§172.704(a)(5)





Who needs a security plan?





HM Risk-Based Adjustment of Transportation Security Plan Requirements

- Narrows the list of materials subject to current security plan requirements for the transportation of hazardous materials
- Only certain types and quantities of hazardous materials will be covered under the new security plan regulation
- Considers physical and chemical properties, quantities shipped, mode of transportation, past terrorist use, potential use, availability of the materials and how they could contribute to a security incident





Class/Division PHMSA Final Rule Security Plan Revisions

- 1.1 Any quantity
- 1.2 Any quantity
- 1.3 Any quantity
- 1.4 Placarded quantity
- 1.5 Placarded quantity
- 1.6 Placarded quantity
- 2.1 A large bulk quantity
- 2.2 A large bulk quantity of materials with an oxidizer subsidiary
- 2.3 Any quantity





Class/Division PHMSA Final Rule Security Plan Revisions (Cont...)

- **3.** PG I and II in a large bulk quantity; Placarded quantity desensitized explosives - liquid
- **4.1** Placarded quantity desensitized explosives - solid
- **4.2** PG I and II in a large bulk quantity
- **4.3** Any quantity
- **5.1** Division 5.1 materials in PG I and II, and PG III perchlorates, ammonium nitrate, ammonium nitrate fertilizers, or ammonium nitrate emulsions or suspensions or gels in a large bulk quantity
- **5.2** Any quantity of Organic peroxide, Type B, liquid or solid, temperature controlled





Large Bulk Quantity

Definition of Large Bulk Quantity:

- “Large Bulk Quantity” refers to a quantity greater than >
- 3,000 kg (6,614 pounds) for solids
- 3,000 liters (792 gallons) for liquids
- gases in a single packaging such as a cargo tank motor vehicle, portable tank, tank car, or other bulk container





Overview of the Security Requirements

- Security plan requirements
- Security awareness training
- In-depth security training
- Initial and recurrent training and record keeping
- Security plan administration





Security Threat Assessment

Security threat assessment for hazardous material transportation created and prepared for:

- Hazardous materials in transportation
- Storage incidental to transportation





Elements of a Security Plan

Security plans must include the following elements:

- Personnel security
- Unauthorized access
- En route security





Security Plan Components

Required components are:

- Security plan must be in writing
- Plan must address security threat assessment
- Must detail security duties for each position or department responsible for implementing the plan
- Plan must be revised and/or updated as necessary to reflect changing circumstances
- Retained for as long as it remains in effect.
- Plan must be reviewed at least annually

§172.802





Security Plan Components (Cont...)

- Most recent version of the plan must be available to employees
- All employees must be notified of any revised or updated changes
- A plan for training hazmat employees in accordance with 172.704 (a) (4) and (a) (5)
- Must make the plan available upon request to authorized official of the US DOT and Homeland Security

§172.802





Security Plans Approved by Other Organizations

- HM-232 permits security plans that conform to regulations or standards issued by other Federal agencies, international organizations, or industry groups
- Examples may include security requirements imposed by USCG, DOD, NRC, UN, IMO, or TSA

§172.804





Security Assessment

To develop a security plan, you should begin with a security assessment.

- Identify hazardous materials handled and identify them with the potential use as a weapon or target of opportunity.
- Review current activities and operations from a transportation security perspective.
- Ask yourself, **“What are we doing now? What could go wrong? What can we do differently?”**





Additional Information

Up-to-date information is a key element of any security plan. You should consider methods to:

- Gather as much data as you can about your own operations.
- Develop a communications network to share best practices and lessons learned.
- Share information on security incidents to determine if there is a pattern of activities
- Revise your security plans as necessary to take into account changing circumstances and new information.

§172.804





In-Depth Security Training

- Each hazmat employee required to have a security plan who handles hazardous materials, performs a regulated function or is responsible for implementing the plan must be trained concerning the plan and its implementation
- Security training must include:
 - Company security objectives
 - Organizational security structure
 - Specific procedures
 - Specific security duties and responsibilities for each employee
 - Actions to be taken by each employee in the event of a security breach

172.704 (a) (5)





Training Source

- Training may be provided by the employer or other public or private sources
- USDOT does not *approve, endorse, or certify* anyone's training program or product.
- The hazmat employer *certifies* that a hazmat employee has been trained.
- Hazmat training received from a previous employer or other source can be used to meet the HMR requirements provided that a current record of training is obtained from the previous employer.

§172.702(c) &





Testing

- Each hazmat employer must ensure that every hazmat employee is tested on the required training subjects.
- The HMR does not set testing methods or standards. The responsibility is on the hazmat employer.
- The regulation does not specify the type of test or grading. This could be a **written** test, **verbal** test or **performance** test. Remember that this must be properly documented.





Employee Training Record

HAZMAT EMPLOYEE TRAINING RECORD

Employee Name: _____

I certify that the hazmat employee identified on this training record has been trained and tested as required by the Hazardous Materials Regulations, Subpart H.

Signed: _____ Title: _____

GENERAL AWARENESS / FAMILIARIZATION

Description, Copy, and Location of Training	Training Provided By	Test / Score (not mandatory)	Date Trained
Hazmat DigiPack located in main office	Employer Training Officer Jane Doe	No Test	July 14, 2007
Hazardous Materials Transportation Training Modules - Copy located in main office	Employer Training Officer Jane Doe	Test attached to file: 98%	July 14, 2007

FUNCTION SPECIFIC

Description, Copy, and Location of Training	Training Provided By	Test / Score (not mandatory)	Date Trained
DOT Hazardous Materials Transportation Training Modules 3 and 4: Packaging, Marking and Labeling - Copy located in main office	Employer Training Officer Jane Doe	Test attached to file: 100%	July 14, 2007
Performance Demonstration of Packaging, Marking and Labeling - Checklist of items performed attached to this training record	Supervisor Dan	Successfully demonstrated: 100%	July 28, 2007

SAFETY TRAINING

Description, Copy, and Location of Training	Training Provided By	Test / Score (not mandatory)	Date Trained
Hazardous Materials Transportation Safety - Copy of training materials available in main office	Hazmat Safety Consultative Service 123 Anywhere St. Somewhere, USA	Certificate of Completion and test attached to file: 97.5%	July 14, 2007

SECURITY AWARENESS TRAINING

Description, Copy, and Location of Training	Training Provided By	Test / Score (not mandatory)	Date Trained
Hazmat Transportation Security Awareness Training Module - USDOT/PHMSA. Copy of CD-ROM and test available in main office	Supervisor Dan	Certificate of Completion and test attached to file: 97.5%	July 14, 2007

INDEPTH SECURITY TRAINING

Description, Copy, and Location of Training	Training Provided By	Test / Score (not mandatory)	Date Trained
Company Security Plan and Training - Copy of training materials available in main office	Supervisor Dan	Verbal Test given: Passed	July 30, 2007

Sample Training Record





OSHA or EPA Training

Training completed to meet OSHA or EPA requirements that addresses training specified in §172.704(a) may be used to satisfy the HMR training requirements.



§172.704(b)





Record Retention

A record shall be:

- Created and retained by hazmat employer
- A current training record must be retained as long as hazmat employee is employed by that employer, and
- Retained for 90 days after employee is no longer employed by that employer



§172.704(d)





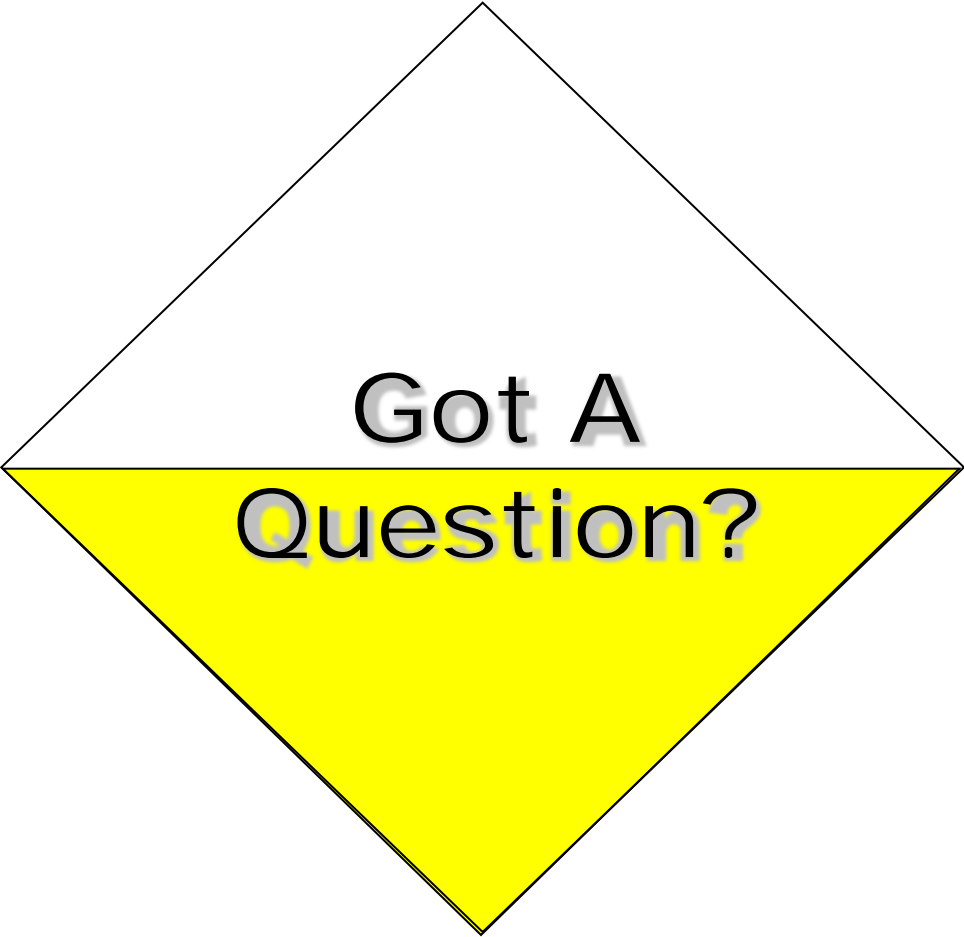
Recordkeeping

The training record must include:

- Hazmat employee's name
- Most recent training completion date
- Description, copy, or location of the training materials
- Name and address of person providing the training
- "Certification" that the hazmat employee has been trained and tested



§172.704(a)





Where to Find More Information...

The screenshot displays the PHMSA (Pipeline and Hazardous Materials Safety Administration) website. The header includes the PHMSA logo, the U.S. Department of Transportation logo, and navigation links for "Contact Us", "FAQs", and "Site Map". Below the header is a navigation bar with "PHMSA Home", "Pipeline Safety", and "Hazardous Materials Safety" tabs. A search bar with a "Go" button and "Advanced Search" link is also present.

The main content area features a large banner for the "2012 EMERGENCY RESPONSE GUIDEBOOK" with the text "DOT Distributes Over 2 Million New Hazardous Materials Emergency Guidebooks to Nation's First Responders". To the right, there are sections for "Hazmat News" and "Most Viewed Info" under the "Safety Advisories" tab. The "Safety Advisories" section lists several links: "PHMSA Continues Push to Clarify & Update Hazmat Rules", "2011 Hazmat Penalty Action Report", "Hazmat Harmonization Rule on Air Packaging Issued", "PHMSA seeks comment on transportation of lithium batteries", and "PHMSA Proposes Updating Hazmat Rules to Better Balance Safety Standards and Regulatory Requirements".

Below the banner, there is a "Find PHMSA Offices" section with a "Key Officials" link, a "Regional Offices" dropdown menu, and a map of the United States showing regional divisions. To the right of this is a "PHMSA/Hazmat Resources" section with links for "Regulations & Rulemakings", "Data & Reports", and "Permits & Approvals".

<http://hazmat.dot.gov>





Hazardous Material Info-Center

1-800-HMR-4922

(1-800-467-4922)

E-mail: infocntr@dot.gov

Hours of Operation: 9 am – 5 pm ET



- Obtain answers to HMR questions
- Request copies of Federal Register, special permits or training materials
- Report HMR violations
- Fax on Demand

